

APPENDIX A

Inputs: transmitted_signal(1), received_signal (2)

Output: output_signal going to the network (3)

5 Start:

Calculate the power of the signal to be broadcast by the handset speaker;

AbsY = (1-alpha)AbsY + alpha*abs(transmitted_signal);

Chose the mask that corresponds to the power of the signal to be broadcast by the handset speaker;

10 Mask = Mask_select(AbsY);

Output_signal = received_signal AND Mask;

Go to Start;

where:

15 transmitted_signal is the signal received by the telephone device to be broadcast by the handset speaker;

received_signal is the echo signal picked up by the handset microphone and voice signals picked up by the handset microphone;

alpha is an IIR filter parameter; and

20 Output_signal is the signal output to the network by the telephone device.

APPENDIX B

Power Level Calculation Routine

```
5   if AbsY > AbsY0
        AbsY=(1- alpha_slow)*AbsY + alpha_slow *AbsY0;
    else
        AbsY=(1- alpha_fast)*AbsY + alpha_fast *AbsY0;
    end
```

10

Mask Selection Routine

```
15      Mask_select:
            Mask = 64512;      %fc00 or 10 zeros (1111110000000000)
            if AbsY < 4063
                Mask = 65024;      %fe00 or 9 zeros
            end
            if AbsY < 2031
                Mask = 65280;      %ff00 or 8 zeros
            end
            if AbsY < 1015
                Mask = 65408;      %ff80 or 7 zeros
            end
            if AbsY < 507
                Mask = 65472;      %ffc0 or 6 zeros
            end
            if AbsY < 253
                Mask = 65504;      %ffe0 or 5 zeros
            end
            if AbsY < 126
                Mask = 65520;      %fff0 or 4 zeros
            end
            if AbsY < 63
                Mask = 65528;      %fff8 or 3 zeros
            end
            if AbsY < 31
                Mask = 65532;      %fffc or 2 zeros
            end
            if AbsY < 15
                Mask = 65534;      %ffffe or 1 zero
            end
```